

## REMARKS/ARGUMENTS

### I. Non-Prior Art Matters.

A. Information Disclosure Statement. The Information Disclosure Statement citing non-English references requires a concise explanation of their relevance.

5 Applicant submits the relevance of the non-English references are fully explained in the Background of the Invention Section of the Specification.

B. The Office Action objected to the Drawings. The Drawings were rejected in combination with the Specification for multiple reasons, including incorrect character references both in the Drawings and in the Specification, as well as the lack thereof  
10 to support the claims. The Specification and Drawings, as attached, have been amended to correct these deficiencies. In the Drawings the changes are so noted in red and circled for ease of locating for the Examiner.

C. The Office Action objected to the Specification. The Abstract has been amended and the same text has been inserted at the beginning of the Summary of the  
15 Invention heading. Other parts of the Specification have been reformed to correct objections and deficiencies. A clean substituted Specification is attached to this Amendment which may be utilized by the Examiner. The undersigned avers that no new matter has been added.

D. The Office Action objected to claims 6 and 10. An appropriate amendment has been made. claim 6 has now been limited by the feature that actually the  
20 surface of at least a part of the surface of the liquid channels of the analysis chips has biological materials for binding the molecules contained in the analyte. In contrast thereto, according to the subject matter of claim 1, only the surface is designed in such a way that biological material can be fixed on the surface. In other words, according to claim 1, an apparatus is claimed, wherein no probe molecules are immobilized on the surface of the  
25 liquid channels of the analysis chips so far. However, according to the subject matter of amended claim 6, the probe molecules, in other words, the biological material, have already been immobilized on the surface of the liquid channels of the analysis chips. Therefore, amended claim 6 further limits the scope of presently pending amended claim 1.

Furthermore, claim 10 as amended to clarify that the pump is operated in such a way that analyte is sucked at a pressure which is less than an analyte surface tension possibly formed in the pipette, an actual limitation of the claimed subject matter is achieved.

5 E. The Office Action rejected claims 1-10 under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims need only “reasonably apprise those skilled in the art” for their scope and be “as precise as the subject matter permits.”<sup>1</sup> The test of definiteness is whether one skilled in the art would understand the bounds of the claim when read in light of the specification. If  
10 the claims read in light of the specification reasonably apprise those skilled in the art of the scope of the invention, §112 demands no more.<sup>2</sup>

A claim need not describe the invention, such description being provided by the specification’s disclosure section.<sup>3</sup>

An appropriate amendment has not been made.

15 II. Prior Art Matters.

A. The Office Action rejected claims 1-6 under 35 USC 103(a) as being unpatentable over applicant’s prior art in view of Nagai and Eitan. Applicant respectfully traverses the rejections.

The examiner bears the initial burden of factually supporting any *prima facie*  
20 conclusion of obviousness.<sup>4</sup> If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of non-obviousness.<sup>5</sup>

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<sup>1</sup> *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1385, 231 USPQ 81 (Fed. Cir. 1986)

<sup>2</sup> *id.*

<sup>3</sup> *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1 USPQ2d 1081 (Fed. Cir. 1986)

<sup>4</sup> MPEP Sec. 2142.

<sup>5</sup> *Id.*

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure.<sup>6</sup>

Applicant respectfully traverses the §103 rejection because the Office Action has not established a *prima facie* case of obviousness.

The examiner is of the opinion that the subject matter of the independent claim was unpatentable over Flesher (U.S. 4,532,805) in view of Rava et al (U.S. 5,545,531) or Tajema (U.S. 5,895,631). Flesher shows a multi-pipette system comprising a pump for a plurality of pipettes. However, Flesher lacks to disclose any application of the pipette system with regard to the analysis of biological material.

In contrast thereto, the apparatus for taking up liquid analytes according to the subject matter of the independent claim is an apparatus, which is specifically adapted for the analysis of biological material, which raises very specific requirements with regard to the structure of the pipette system. In particular, a pipette system for analyzing biological material has to be a low cost system and should provide an exact and reliable analysis possibly performed on the analyte, in particular a reliable result of the examination as to whether a specific biological material is included in the analyte or not. Furthermore, the analysis should be performed as quickly as possible in order not to spend too much time on the analysis. In order to achieve the above objects, the apparatus according to the invention comprises analysis chip for each well and each pipette, wherein the analysis chip comprises a plurality of liquid channels, through which the analyte is sucked. This surface of the liquid channels is designed for immobilization of biological material, in particular for immobilization of probe molecules for binding predetermined molecules contained in the analyte. In particular, the combination of one pump for a plurality of pipette wells and thereby for a plurality of liquids for analysis chips with the plurality of liquid channels provides a very homogeneous, easy

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<sup>6</sup> Id. (emphasis supplied)

and cheap way for performing a profound and reliable analysis of the analyte. Flesher does not give a hint of any of the above described features nor to the above described objects.


Furthermore, Rava et al discloses a microtitre plate with a plurality of DNA chips wherein the DNA chips are all located on the bottom of the microplate wells, since they are arranged on the DNA chipwafer as can be gathered from figure 4 and in more detail from figures 5 and 6 of Rava et al. Therefore, even if Flesher and Rava et al would be combined, the person skilled in the art would only come to a pipette system with a pump and with DNA chips located on the bottom of the respective wells. No hint can be found on the provision of the analysis chip comprising a plurality of liquid channels which are arranged and adapted according to the invention. In this context, it should be mentioned that the combinational effect of the pump for a plurality of pipettes together with the arrangement and adaptation of the analysis chip achieve a very homogeneous and therefore reliable way for analyzing an analyte. Therefore, we are of the opinion that the supplement of the independent claim is inventive over Flesher even in view of Rava et al.

The same argument holds in principal with regard to Tajima, wherein it should additionally be remarked that Tajima does not even disclose an analysis chip for analyzing an analyte, wherein the analysis chip comprises a plurality of liquid channels, wherein the surfaces of the liquid channels are adapted to an immobilization of molecules. Therefore we are of the opinion that the subject matter of the amended independent claim is inventive even over Flesher, in view of Rava et al, in view of Tajima.

Should the examiner find a telephonic conference with the undersigned will facilitate moving this case to an allowance, the examiner is cordially invited to telephone the undersigned.

Respectfully submitted,

Dated: 30 mar 04

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